



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Bradley S. Hoyl; Carl G. Harrison; Maurice Robertson
Assignee: Cisco Technology, Inc.
Title: FIBER OPTIC CABLING MANAGEMENT USING HOOK AND LOOP FABRIC
Application No.: 09/812,247 Filing Date: March 19, 2001
Examiner: Kimberly T. Wood Group Art Unit: 3632
Docket No.: CIS0118US Confirmation No.: 7809

Austin, Texas
October 23, 2006

Mail Stop: Appeal Brief - Patents
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P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

This brief is submitted in support of the Notice of Appeal regarding the final rejection of claims 1-6, 11-16, 20-23, and 31-37. Appellant notes that the Notice of Appeal filed on July 17, 2006 was received by the U.S. Patent and Trademark Office on July 21, 2006. This Appeal Brief is timely filed with a petition for a one-month extension of time that extends the period for filing to October 23, 2006 (since October 21, 2006 was a Saturday).

Please charge deposit account No. 502306 for the fee of \$500.00 associated with this Appeal Brief. Please charge this deposit account for any additional sums that may be required to be paid as part of this appeal.

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REAL PARTY IN INTEREST

The real party in interest on this appeal is the assignee, Cisco Technology, Inc. as named in the caption above.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this application.

STATUS OF CLAIMS

Claims 1-6, 11-16, 20-23, and 31-37 pending in the application.

Claims 7-10, 17-19, 24-30, and 38 have been canceled.

Claims 1-6, 11-16, 20-23, and 31-37 are under rejection.

Appellant appeals the rejections of claims 1-6, 11-16, 20-23, and 31-37.

STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection of March 15, 2006.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed to an apparatus that includes a rigid frame, a substrate, and a cable fastener. (*See, for example*, Specification at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.) The rigid frame includes at least one substantially planar surface, and the substrate has a first surface and a second surface substantially opposite the first surface. (*See, for example, id.*) The first

surface of the substrate includes a first plurality of fasteners. (*See, for example, id.* at p. 7, lines 8-12; FIG. 5 (showing one surface of substrate 502 with hook and loop material).) The first plurality of fasteners are of one of a plurality of hook and loop mechanisms. (*See, for example, id.* at p. 7, lines 8-12 and 14-15.) The second surface of the substrate is coupled to the substantially planar surface of the rigid frame. (*See, for example, id.* at p. 6, line 28—p. 7, line 3; FIG. 5 (showing frame 506 supporting substrate 502).)

The cable fastener includes a second plurality of fasteners that covers at least all of one side of the cable fastener; the second plurality of fasteners is of the one of the plurality of hook and loop mechanisms. (*See, for example, id.* at p. 7, lines 23-29; FIGS. 5, 6, and 8.) The second plurality of fasteners is configured to engage the first plurality of fasteners. (*See, for example, id.*)

The cable fastener is completely detachable from the substrate. (*See, for example, id.* (describing a the use of “a separable bond”); *id.* at p. 8, lines 10-13 and 20-22 (describing the use of a “releasable bond.”) The second plurality of fasteners does not engage any portion of the cable fastener. (*See, for example, id.* at p. 7, line 14 (disclosing a substrate material that contains only the equivalent of hooks); *id.* at original claim 1 (reciting a substrate that “contains” one of a plurality of hook and loop mechanisms, and a tie wrap that “contains” another of the plurality of hook and loop mechanisms).

The cable fastener is further shaped to define a variable-width opening (*see, for example, id.* at p. 6, lines 24-28; p. 8, lines 18-20), an elongated body having a predetermined width (*see, for example, id.* at p. 8, lines 13-16; FIG. 8, body 802), and a

head portion at one end of the body (*see, for example, id.* at p. 8, lines 13-16; FIG. 8, head portion 804). The head portion has a width greater than the predetermined width (*see, for example, id.* at p. 3, lines 8-10; FIG. 8, head portion 804 and body 802), and has a size substantially similar to a size of the variable-width opening (*see, for example, id.* at p. 3, lines 8-11; FIG. 8 (illustrating an example of relative proportions of head portion 804 and body 802)). The head defines an opening through which the elongated body of the cable fastener may pass. (*See, for example, id.* at p. 3, lines 10-11).

Claims 2-6 depend on claim 1.

Independent claim 11 is directed to a method of managing cable. The method includes supporting one or more cables with a cable fastener, releasably engaging the cable fastener to a substrate, and providing a rigid frame capable of accommodating a plurality of fiber cables. (*See, for example,* Specification at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.)

The cable fastener is shaped to be capable of defining a variable-width opening (*see, for example, id.* at p. 6, lines 24-28; p. 8, lines 18-20), and includes a strap on which are mounted a first plurality of one type of hook and loop mechanisms (*see, for example, id.* at p. 7, lines 8-12; FIG. 5 (showing one surface of substrate 502 with hook and loop material).) The first plurality of one type of hook and loop mechanisms covers at least all of one side of the cable fastener. (*See, for example, id.* at p. 7, lines 23-29; FIGS. 5, 6, and 8.) The first plurality of hook and loop mechanisms is configured so that it does not engage any portion of the cable fastener. (*See, for example, id.* at p. 7, line 14 (disclosing

a substrate material that contains only the equivalent of hooks); *id.* at original claim 1 (reciting a substrate that “contains” one of a plurality of hook and loop mechanisms, and a tie wrap that “contains” another of the plurality of hook and loop mechanisms).

The cable fastener is completely detachable from the substrate. (*See, for example, id.* (describing a the use of “a separable bond”); *id.* at p. 8, lines 10-13 and 20-22 (describing the use of a “releasable bond.”) The substrate includes a second plurality of another type of hook and loop mechanisms. (*See, for example, id.* at p. 7, lines 23-29; FIGS. 5, 6, and 8.)

The rigid frame includes at least one substantially planar surface. (*See, for example, Specification* at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.) The substrate is coupled to the substantially planar surface of the rigid frame. (*See, for example, id.* at p. 6, line 28—p. 7, line 3; FIG. 5 (showing frame 506 supporting substrate 502).)

Claims 12-16 and 20-22 depend on claim 11.

Independent claim 23 is directed to an apparatus that includes a means for supporting one or more cables, a means for releasably engaging the cable fastener to a substrate, and a cable routing apparatus. (*See, for example, Specification* at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.) The means for supporting one or more cables includes a cable fastener. The cable fastener is shaped to define a variable-width opening. (*See, for example, id.* at p. 6, lines 24-28; p. 8, lines 18-20.)

The means for releasably engaging the cable fastener covers at least all of one side of the cable fastener. (*See, for example, id.* at p. 7, lines 23-29; FIGS. 5, 6, and 8.) The cable fastener is completely detachable from the substrate. (*See, for example, id.* (describing a the use of “a separable bond”); *id.* at p. 8, lines 10-13 and 20-22 (describing the use of a “releasable bond.”)

The means for releasably engaging includes at least one of: one or more mushroom-shaped stems, one or more pine-tree-shaped stems, one or more hooks, and one or more loops. (*See, for example, id.* at p. 7, lines 8-22.) The means for releasably engaging is configured not to releasably engage with any portion of the cable fastener. (*See, for example, id.* at p. 7, line 14 (disclosing a substrate material that contains only the equivalent of hooks); *id.* at original claim 1 (reciting a substrate that “contains” one of a plurality of hook and loop mechanisms, and a tie wrap that “contains” another of the plurality of hook and loop mechanisms).

The cable routing apparatus includes a rigid frame. The cable routing apparatus is configured to releasably engage the means for releasably engaging. The rigid frame includes at least one substantially planar surface. (*See, for example, Specification* at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.) The substrate is coupled to the substantially planar surface of the rigid frame. (*See, for example, id.* at p. 6, line 28—p. 7, line 3; FIG. 5 (showing frame 506 supporting substrate 502).)

Claims 31-33 depend on claim 23.

Independent claim 34 is directed to an apparatus for managing cable, and includes a cable routing apparatus, a planar substrate, and a tie wrap. (*See, for example, Specification at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.*) The cable routing apparatus includes a rigid frame that is capable of accommodating a plurality of cables. (*See, for example, id.*) The rigid frame has at least one planar surface. (*See, for example, id.*)

The planar substrate has a first surface and a second surface. (*See, for example, id.*) The second surface is substantially opposite the first surface. (*See, for example, id.*) The first surface of the substrate includes a plurality of engagement mechanisms. (*See, for example, id.* at p. 7, lines 8-12; FIG. 5 (showing one surface of substrate 502 with hook and loop material).) The second surface of the substrate is coupled to the planar surface of the rigid frame. (*See, for example, id.* at p. 6, line 28—p. 7, line 3; FIG. 5 (showing frame 506 supporting substrate 502).)

The tie wrap includes loops capable of engaging the engagement mechanisms of the substrate. The loops cover at least all of one side of the tie wrap. (*See, for example, id.* at p. 7, lines 23-29; FIGS. 5, 6, and 8.) The tie wrap is completely detachable from the substrate. (*See, for example, id.* (describing a the use of “a separable bond”); *id.* at p. 8, lines 10-13 and 20-22 (describing the use of a “releasable bond.”)) The tie wrap is capable of being releasably engaged to the substrate by means of a hook and loop connection. (*See, for example, Specification at p. 6, lines 19-24; p. 6, line 28—p. 7, line 3; FIG. 5, frame 506, substrate 502, tie wrap 504.*) The loops are configured not to engage any portion of the tie wrap. (*See, for example, id.* at p. 7, line 14 (disclosing a

substrate material that contains only the equivalent of hooks); *id.* at original claim 1 (reciting a substrate that “contains” one of a plurality of hook and loop mechanisms, and a tie wrap that “contains” another of the plurality of hook and loop mechanisms).

The tie wrap is shaped to define an elongated body having a predetermined width, (*see, for example, id.* at p. 8, lines 13-16; FIG. 8, body 802), and a head portion at one end of the elongated body (*see, for example, id.* at p. 8, lines 13-16; FIG. 8, head portion 804). The head portion has a width greater than the predetermined width (*see, for example, id.* at p. 3; lines 8-10; FIG. 8, head portion 804 and body 802), defines an opening through which the elongated body of the tie wrap may pass (*see, for example, id.* at p. 3, lines 10-11),, and has a size substantially similar to a size of the opening (*see, for example, id.* at p. 3, lines 8-11; FIG. 8 (illustrating an example of relative proportions of head portion 804 and body 802)).

Claims 35-37 depend on claim 34.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

In the Final Office Action dated March 15, 2006 (the “Final Office Action”), claims 1-6, 11-16, 20-23, and 31-37 were rejected under 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,666,265 issued to Lutz et al. (“*Lutz*”), U.S. Patent No. 5,292,312 issued to Delk et al. (“*Delk 312*”), and further in view of U.S. Patent No. 5,300,037 issued to Delk et al. (“*Delk 037*”).

THE CLAIMS ARE PATENTABLE UNDER 35 U.S.C. § 103(a)

Appellant submits that the Final Office Action fails to set forth a *prima facie* case of obviousness under § 103(a) for at least three separate reasons. First, the cited references, whether taken individually or in combination, fail to disclose each limitation of Appellant's claims. Second, a person having ordinary skill in the art would not find a suggestion or motivation, either in the cited references or in the knowledge available to one of ordinary skill, to make the proposed combination of references. Third, even if the references were to be combined, they would not successfully achieve Appellant's invention.

To start, however, Appellant notes additional shortcomings of the Final Office Action. The Final Office Action fails to address each limitation of Appellant's claims, and also fails to set forth clearly the nature of the rejections. Appellant respectfully submits that these additional shortcomings should themselves be seen as grounds for reversal of the pending rejections.

*The Final Office Action fails to address
each limitation of Appellant's claims.*

Various limitations of the independent claims are simply not discussed in the Final Office Action. The Final Office Action is silent with regard to these clearly recited limitations. Independent claim 1 includes a limitation where **a second plurality of fasteners is configured not to engage any portion of a cable fastener**. Independent claim 11 includes a **first plurality of hook and loop mechanisms configured not to**

engage any portion of a cable fastener. Independent claim 23 includes a **means for releasably engaging a cable fastener to a substrate, configured not to releasably engage with any portion of the cable fastener.** Independent claim 34 includes **loops configured not to engage any portion of a tie wrap.** The Final Office Action does not address these limitations. The Final Office Action thus fails to set forth, on its face, adequate grounds for the pending rejections. At least for these reasons, the Final Office Action has failed to support the rejections of independent claims 1, 11, 23, and 34.

*The Final Office Action fails to set forth
clearly the nature of the rejections.*

Additionally, Appellant respectfully submits that the particular parts of the cited references that the Final Office Action has relied upon have not been designated as nearly as practicable, and the pertinence of each reference has not been clearly explained, both as required by 37 C.F.R. § 1.104(c)(2). The pending rejections thus fall short of the standards required for a rejection under § 103(a).

Additionally, with respect to many of the claim limitations that were addressed in the Final Office Action, Appellant has been left to speculate as to the Final Office Action's intended application of the cited references to the claim limitations. At many points in the Final Office Action, it is not clear where one line of reasoning ends and another begins. The Final Office Action is also self-contradictory in its assessments of the cited art. For example, the Final Office Action makes the following assessments of *Lutz.*

- “*Lutz* discloses the claimed invention except that instead of fiber, electrical, or metal cables they show power cables.” (Final Office Action at pp. 2-3.)
- “*Lutz* discloses all of the limitations of the claimed invention except for the hooks being mushroom shaped, pine-tree-shaped.” (Final Office Action at p. 3.)
- “*Lutz* discloses all of the limitations of the claimed invention except for the cable fastener having a head having a width greater than the predetermined width and defining an opening.” (Final Office Action at p. 4, and again on p. 5.)

These conclusions in the Final Office Action are inconsistent with each other, since they come to contradictory conclusions regarding the comparison of Appellant’s claims with the *Lutz*. Because of these internal contradictions in the Final Office Action, the reasoning provided for the intended rejections is unclear.

The cited references, taken either individually or in combination,

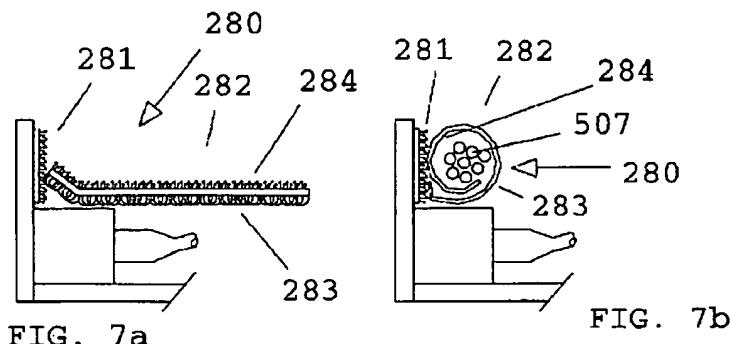
fail to disclose each limitation of Appellant’s claims.

Despite the shortcomings of the explanations set forth in the Final Office Action, Appellant has made every effort to review the cited references in an effort to respond to the pending rejections. Appellant initially notes that the cited references, taken either individually or in combination, fail to disclose each limitation of the pending claims.

For example, Appellant’s independent claim 1 has a cable fastener that includes a second plurality of fasteners. The limitations of claim 1 place various requirements on the nature of the cable fastener, including how and to what the cable fastener can attach and engage. For example, “**the cable fastener is completely detachable from the**

substrate, and the second plurality of fasteners is configured not to engage any portion of the cable fastener.”

With regard to claim 1, the Final Office Action on p. 2 identifies *Lutz*'s elongate strip 282 as corresponding to a “cable fastener.” However, as stated at col. 8, lines 50-53 of *Lutz*, the elongate strip 282 “provides a covering of female VELCRO 283 on one side and male VELCRO 284 on the other.” With this configuration, the elongate strip 282 may engage another portion of the elongate strip 282. Such a self-engaging configuration is illustrated in FIGS. 7a and 7b of *Lutz* (reproduced below).



Elongate Strip 282 from *Lutz*

These figures from *Lutz* show the elongate strip 282 wrapping onto itself to enclose a bundle of data and power cables and cords 507. The elongate strip is wrapped around the bundle and back onto itself. (*Lutz* at 8:33-62.) This wrapping binds the bundle together, since the elongate strip 282 engages with itself after wrapping around the bundle, as seen in FIGS. 7a and 7b. The wrapped bundle is then attached to a Velcro™ patch that was previously mounted on a workstation housing case. (*Id.*)

This self-engaging feature of the elongate strip 282 in *Lutz* stands in contrast with the cable fastener in Appellant's claim 1. The elongate strip 282 includes fasteners that

are specifically configured to engage another portion of the elongate strip 282. *Lutz's* elongate strip 282 thus does not correspond to the cable fastener of Appellant's independent claim 1—which has a second plurality of fasteners that specifically do not engage any portion of the cable fastener. For similar reasons, *Lutz* also does not disclose each limitation of Appellant's independent claims 11, 23, and 34.

Appellant's claim 1 is also not disclosed in *Delk 312* or in *Delk 037*. *Delk 312* and *Delk 037* each disclose a holder for medical conduits to be secured onto a patient. The holders include a strap portion 30 and a base plate 20. One surface of the strap portion 30 has a Velcro type attachment that enables attachment to the base plate 20.

In *Delk 037*, the strap portion and the base plate are “sonically welded or otherwise permanently attached to one another. It is contemplated that a thermosetting glue may also be used for this attachment.” (*Delk 037* at 8:25-29; see also, Abstract:1-4.) The strap portion and the base plate in *Delk 037* are therefore not detachable from each other. Thus, *Delk 037* fails to disclose the above-quoted requirement of Appellant's claim 1, because the cable fastener is not completely detachable from the substrate. For similar reasons, *Delk 037* also fails to disclose each limitation of Appellant's independent claims 11, 23, and 34.

Delk 312 also falls short of teaching each limitation of Appellant's claim 1. In *Delk 312*, the strap portion 30 is not fully covered with Velcro material. Instead, the strap portion includes a smooth central section 36 that is deliberately smooth and void of Velcro material, as can be seen from FIGS. 1 and 6 (reproduced below). This smooth

central section 36 is “formed by burning out or otherwise removing a band of the hooks from a continuous surface of VELCRO hook material.” (*Delk 312* at col. 7, lines 25-27.)

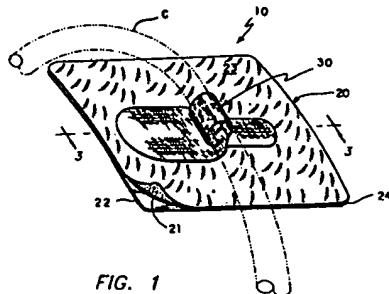


FIG. 1

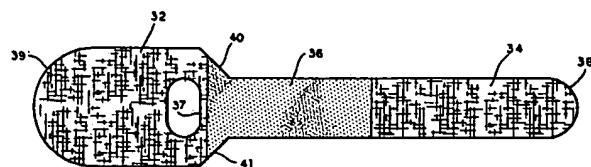


FIG. 6

Base Plate 20 and Strap Portion 30 from *Delk 312*

The smooth central section 36 is not a trivial feature of the *Delk 312* reference. Rather, it is a significant and important aspect of the strap portion 30. The purpose of this smooth section 36 arises from the medical nature of the environment in which the strap portion is used, and from the nature in which the strap portion is wrapped around a conduit during use, as shown in FIG. 1 of *Delk 312*.

[W]hen the strap is wrapped in this manner the most exposed upper surface is the original smooth central section 36 of the bottom seen in FIG. 6. The reason for making this section smooth was so when it was wrapped the strap would present this smooth surface to the environment thus eliminating unwanted snagging on other objects in the environment and accomplishing one of the major goals of the [Delk 312] invention.

(*Delk 312* at 7:57-64. (Emphasis added.)) A person having ordinary skill in the art would therefore readily see the smooth central section 36 is needed to avoid undesirable snagging on other objects, and is an emphasized and important feature of *Delk 312*.

This smooth central section 36 of *Delk 312*, however, stands in direct contrast with the use of a second plurality of fasteners that “**covers at least all of one side**” of the

cable fastener in Appellant's independent claim 1. This feature of *Delk 312* also stands in direct contrast with similar limitations from Appellant's independent claims 11, 23, and 34.

Since neither *Lutz*, nor *Delk 037*, nor *Delk 312* individually disclose each limitation of Appellant's invention, the Final Office Action uses combinations of the cited references to argue the rejections of Appellant's claims under § 103(a). The Final Office Action proposes three different combinations of these references: a *Lutz-Delk 312* combination, a *Lutz-Delk 312-Delk 037* combination, and a *Lutz-Delk 037* combination. Appellant addresses each of the three proposed combinations in turn.

On p. 4, Final Office Action proposes that *Delk 312* could be combined with *Lutz*. The Final Office Action notes on p. 4, lines 1-3 that *Lutz* also falls short of disclosing the limitations of Appellant's claim 1 because it does not disclose a head portion having a size substantially similar to a size of a variable-width opening. The Final Office Action appears to argue that this shortcoming would be overcome by adapting the *Lutz* elongate strip 282 to include the left zone 31 and 32 and the slot 37 from *Delk 312*. However, such a combination would still not meet the limitations of claim 1, because neither *Lutz* nor *Delk 312* disclose an appropriate arrangement of the second plurality of fasteners in Appellant's claim 1.

The proposed *Lutz-Delk 312* device would presumably retain the two-type Velcro arrangement from *Lutz*, and would thus still be a self-engaging structure. (Otherwise, the arrangement would perform poorly in the applications envisioned within *Lutz*.) The proposed combination would thus still not meet the limitations of claim 1 because the

resulting *Lutz-Delk 312* device would lack “a second plurality of fasteners . . . configured not to engage any portion of the cable fastener.”

Alternatively, the *Lutz-Delk 312* device could conceivably use the single-type Velcro arrangement from *Delk 312*. However, such a combination would then lack a second plurality of fasteners that “covers at least all of one side” of the device, since the smooth central section 36 is an important aspect of the Velcro arrangement in *Delk 312*, as explained above.

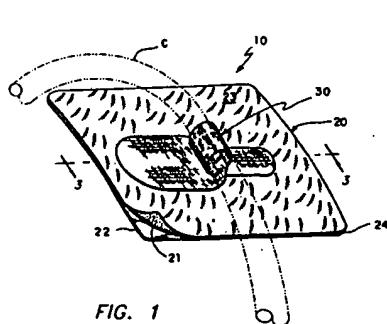
Thus, the combination of *Lutz* and *Delk 312* as proposed in the Final Office Action would not achieve Appellant’s invention—regardless of whether the resulting device uses the Velcro arrangement from *Lutz*, or whether the resulting device uses the Velcro arrangement from *Delk 312*.

The Final Office Action next proposes, on p. 4, line 19—p. 5, line 11, that a three-way combination of *Lutz*, *Delk 312*, and *Delk 037* could be made in order to provide a plurality of fasteners that “covers at least all of one side” of the resulting device.¹ This proposed three-way combination fails to disclose Appellant’s invention for at least two reasons. First, *Delk 037* simply does not teach that the strap portion 30 has fasteners that cover at least all of one side of the strap portion. On the contrary, *Delk 037* teaches that the entire side of the strap portion 30 “need **not** be covered with artificial briar material,”

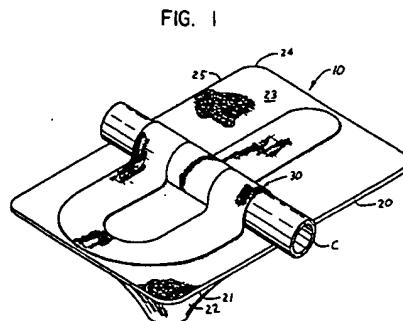
¹ The Final Office Action does not clearly state what features from *Delk 037* would be used in this combination. Nonetheless, in an effort to respond to the rejection, Appellant observes that the Final Office Action proposes the three-way combination in order to overcome the fact that (as discussed above) a two-way *Lutz-Delk 312* combination would not have a plurality of fasteners that “covers at least all of one side” of the resulting device. Thus, Appellant understands that the Final Office Action suggests adding features from *Delk 312* so that the resulting *Lutz-Delk 312-Delk 037* device would have fasteners that “covers at least all of one side.”

but rather that hook type material on the strap portion “need only be formed where it is needed” on areas that will ultimately engage with loops on the base portion 20. (*Delk 037* at col. 8, lines 7-13 (emphasis added).) *Delk 037* thus teaches that the strap portion 30 preferably does not have fasteners that cover at least all of one side of the strap portion. Accordingly, adding the teachings of *Delk 037* as a third reference does not remedy the shortcomings of the two-way *Lutz-Delk 312* device.

Appellant notes that even if *Delk 037* did disclose fasteners that covered at least all of one side of the strap portion, combining *Delk 037* with the teachings of *Delk 312* would be highly problematic. As discussed above, *Delk 312* deliberately includes a smooth central section 36 to avoid undesirable snagging on other objects. To the extent that *Delk 037* does not emphasize a need for a smooth central section, it is because of the differing ways in which *Delk 312* and *Delk 037* operate. As can be seen from FIG. 1 of *Delk 312* and FIG. 1 of *Delk 037* (reproduced below), one of these devices wraps “over” the conduits to be secured onto a patient, while the other device wraps “under” the conduits.



Delk 312



Delk 037

Since these two systems operate differently, they have differing requirements.

For example, *Delk 312* emphasizes the need for a smooth central section 36. While *Delk 037* does not emphasize such a feature, it does require other features. For example, *Delk 037* requires that strap portion and the base plate are “sonically welded or otherwise permanently attached to one another” (*Delk 037* at 8:25-29; see also, Abstract:1-4), as discussed above.

To the extent that a three-way combination of *Lutz*, *Delk 312*, and *Delk 037* could somehow avoid the smooth central section 36 of *Delk 312* (by wrapping in a different geometry around the conduit), it would appear however to require the sonic weld of *Delk 037* between the strap portion 30 and a base plate 20 (in order to stabilize the different wrapping geometry). Thus, the proposed three-way combination would not have a strap portion that “is completely detachable” from a base plate. The three-way combination would thus fail to disclose each limitation of Appellant’s invention for this separate reason.

The Final Office Action next proposes, on pp. 5-6 that *Lutz* be combined with *Delk 037* in order to provide a device with a head portion having a size substantially similar to a size of a variable-width opening and defining an opening through which the elongated body of the cable fastener may pass. Such a combination would also fail to meet the limitations of Appellant’s claimed invention, for reasons similar to those discussed above with respect to the proposed *Lutz-Delk 312* combination. The *Lutz-Delk 037* combination would result in a device that would lack “a second plurality of fasteners . . . configured not to engage any portion of the cable fastener.” Alternatively,

the *Lutz-Delk 037* device would lack a second plurality of fasteners that “covers at least all of one side” of the device. Additionally, the *Lutz-Delk 037* device would not have a strap portion that “is completely detachable” from a base plate because *Delk 037* teaches that these components are sonically welded or otherwise permanently attached to one another (as discussed above with respect to the proposed *Lutz-Delk 312-Delk 037* combination).

Thus, none of the proposed combinations of references would provide a system having each limitation of Appellant’s claimed invention. Appellant also sees no other reasonable manner in which the references might be combined that could even hope to teach the claimed invention. For at least this reason, the rejections of independent claims 1, 11, 23, and 34 are unfounded.

A person having ordinary skill in the art would not have a suggestion or motivation to make the proposed combination of references.

Appellant further submits that a person having ordinary skill in the art would not have a motivation to make the combinations of references proposed in the Final Office Action. The Office Action proposes two separate motivations for making the proposed combinations. Appellant will address each of these proposals in turn.

First, on p. 4, lines 9-14, the Final Office Action proposes substituting the strap from *Delk 312* for the elongate strip of *Lutz*. Similarly, on p. 6 the Final Office Action proposes modifying *Lutz* with the teachings of *Delk 037*. The Final Office Action proposes that the motivation for making these combinations is that the *Delk 312* and

Delk 037 straps are art-recognized equivalents for the elongate strip of *Lutz*. The Final Office Action further argues on pp. 7 and 8 that superficial similarities between the references justify the proposed combinations of references, such as the observations that they “hold[] cables/tubes/wires on a substrate using Velcro type fasteners” (Final Office Action at p. 7, lines 18-20). Appellant respectfully disagrees, since a fuller appreciation of the references militates against such a combination, as discussed below.

The cited art does not state or even suggest that the *Delk 312* and *Delk 037* straps are an art-recognized equivalent for the elongate strip of *Lutz*. Further, a person having ordinary skill in the art would not view these devices as equivalent, since they are each specifically adapted for different purposes. Indeed, such a substitution would not be advisable because the *Delk 312* and *Delk 037* straps are not suitable for the purposes of *Lutz*, and vice-versa.

As depicted in FIGS. 1 and 6 of *Delk 312* (see above), the strap 30 of *Delk 312* has a bulky wide end (discussed in *Delk 312* at col. 7, lines 6-11 and depicted in FIGS. 1, 2, 5, and 6). The bulky wide end of the strap 30 is needed in *Delk 312*’s intended applications in order to accommodate the slot 37. The large geometry of this end is also needed in to ensure that this end of the strap 30 is assured of being securely attached to the base plate 20 in *Delk 312*, which is in turn attached not to a rigid object, but rather to a patient in a medical environment. In anticipation of the fact that the patient may be moving, walking, or rubbing against bedding material or handrails, and so on, a person having ordinary skill in the art for *Delk 312* would appreciate the need for an attachment

between the strap 30 and the base plate 20 that would be as secure as reasonably possible in *Delk 312*.

In contrast, the dimensions of the *Lutz* device are selected to have a compact geometry that is suitable for reaching anchoring sites within a computer housing. The regions of such anchoring sites are mechanically stable, but tightly confined. This geometry and the relevant considerations would be appreciated by a person having ordinary skill in the art for *Lutz* upon viewing FIGS. 7a and 7b of that reference (see above). While a secure attachment is certainly desirable in the *Lutz* system, it must be balanced against the need to flexibly attach a bundle of cables to a supporting wall in the confined space within a portable workstation housing.

The bulky wide end of the strap 30 from *Delk 312* would limit the possible options for securing cables if it were to be used in the *Lutz* system. As discussed in col. 8, lines 48-53 of *Lutz*, a feature of the *Lutz* system is the ability to attach cables to a desired advantageous portion of a workstation housing. This flexibility would be greatly compromised by the geometry of the bulky wide end of the strap from *Delk 312*. While this bulky wide end is a necessity for the strap 30 of *Delk 312*, it would be a hindrance in the system of *Lutz*. For these reasons, a skilled person would not seek to use the *Delk 312* strap in the *Lutz* system. For similar reasons, a skilled person would also not seek to use the *Delk 037* strap in the *Lutz* system.

The Final Office Action also proposes on p. 8 that claim 11 of *Lutz* presents a motivation or suggestion for the combination of *Lutz* with *Delk 312*. Appellant respectfully disagrees, since claim 11 of *Lutz* merely discusses features of *Lutz* and does

not at all mention configurations in any way comparable to *Delk 312*, and does not have any description of features from *Delk 312*.

Second, on p. 5 the Final Office Action proposes modifying *Delk 312* with the teachings of *Lutz*, and argues that a motivation for the modification would be “to hold a wider variety of cable sizes and shapes.” This motivation is not, however, found in either *Lutz*, *Delk 037*, or *Delk 312*. Further, the Final Office Action does not explain how such a modification would enhance the ability of the *Delk 312* system to hold a wider variety of cable sizes and shapes. Appellant submits that such a modification would not achieve the desired goal, since *Delk 312* is already described as being suitable for holding a large variety of conduits to a patient in the context of the medical environment. (*Delk 312* at 5:53-57.) A person having ordinary skill in the art would not have the motivation proposed in the Final Office Action to expand on this already wide capability to hold a variety of conduits.

Still further, such a modification would not present itself to a person having ordinary skill in the art because such a modification would disrupt the operation of the devices in *Lutz* and *Delk 312*. These references use very different methods to hold objects. *Delk 312*’s strap 30 includes an end with a cutout 37, and the other end of the strap 30 passes around a medical conduit and through the cutout 37 to surround the medical conduit. In contrast, *Lutz*’s elongate strip 282 has no opening and, unlike either *Delk 312* or *Delk 037*, uses two types of fastener material to wrap onto itself and around cables. The bonding depicted in FIGS 7a and 7b of *Lutz* would fail if only one type of

fastener is used: the modified elongate strip would not be able to bond to itself as it rolls, and would have a severely diminished ability to securely hold cables.

Additionally, using the two fastening materials from *Lutz* in the *Delk 037* strap would create problems of snagging on surrounding materials, introducing a problem that *Delk 312* and *Delk 037* seek to avoid. (*Delk 312* at Abstract; *Delk 037* at Abstract.)

Conversely, using the *Delk 037* central cutout and single-sided Velcro in the *Lutz* elongate strip results in either a non-working strip (that cannot wrap onto itself) and/or a diminished flexibility for attaching cables to an advantageous portion of a workstation housing (because of the large bulky end). It is not clear what advantage, if any, would be provided by either modification. These shortcomings, and the lack of a counterbalancing advantage, further weigh against the proposition that a person having ordinary skill in the art would have a motivation to make the proposed modification.

It may be argued that the *Lutz* elongate strip could be modified to include the *Delk 037* central cutout, but could retain the use of two types of fastener material. However, in that situation, a different kind of failure would occur. The modified elongate strip would then have a central cutout that is not needed (since the double-fastener strip can already bond to itself), and which introduces a bulkiness that again diminishes the desired flexibility of attaching cables to an advantageous portion of a workstation housing. A person having ordinary skill in the art would not attempt such an awkward and impedimentary construction, and thus would not have a motivation to make the modification proposed in the Final Office Action. (Moreover, the Final Office Action

does not appear to suggest such a modification, and no reason or advantage has been presented for such a modification.)

In addition, the medical nature of the devices in *Delk 312* and *Delk 037* dictate that the base plate 20 is not rigid. Rather, the base plate is “formed of a moderately pliable material that will contour to a patient’s skin and still be easy to trim to size for special applications such as for use with infants.” (*Delk 312* at 6:4-7; *Delk 037* at 6:61-64.) This aspect of the *Delk 312* and *Delk 037* devices stands in direct contrast with the use of rigid supporting structures such as the base and lid of a portable workstation housing in *Lutz* (Lutz at 2:22-48). This further contrast between the systems further weighs against the proposition that a skilled person would have a motivation to combine them.

Still further, a person having ordinary skill in the art would not modify any of these incommensurate *Lutz*, *Delk 312*, or *Delk 037* methods of operation with the others because each one is in itself a working and self-consistent solution. A person having ordinary skill in the art would find *Lutz* to be a complete teaching for the goals set forth therein, and would not seek to modify the *Lutz* system with the teachings of *Delk 037* or *Delk 312*. Similarly, a person having ordinary skill in the art would find the *Delk 037* and *Delk 312* systems to be complete teachings for the goals set forth therein, and would not seek to modify the *Delk 037* or *Delk 312* systems with the teachings of *Lutz*.

For these reasons, Appellant respectfully submits that a person having ordinary skill in the art would not find a motivation or suggestion, either within the cited

references, or within the knowledge available to a skilled person, to make the proposed combination of references. For this reason as well, the pending rejections are unfounded.

*Even if the references were to be combined, they would
not successfully achieve Appellant's invention.*

In view of the foregoing discussions, it is not clear what, if anything, could be achieved by the proposed combinations of the cited references. What is clear, however, is that none of these combinations would achieve Appellant's invention. None of the combinations would result in a device that includes a cable fastener with a plurality of fasteners of one of the plurality of hook and loop mechanisms that covers at least all of one side of the cable fastener and is configured not to engage any portion of the cable fastener, and with a head portion defining an opening through which the elongated body of the cable fastener may pass.

As discussed above the various attempts to combine the references would result at most in failed systems that would either have the two-type self-engaging Velcro arrangement from *Lutz* (and thus fail to be “configured not to engage any portion of the cable fastener”), or would have the smooth central section 36 required in *Delk 312* (and thus fail to provide fasteners that “cover[] at least all of one side” of the device), or would require the sonic weld of *Delk 037* (and thus fail to provide elements that are “completely detachable”), or would present combinations of these shortcomings. For at least these reasons as well, Appellant submits that the pending rejections are unfounded.

CONCLUSION

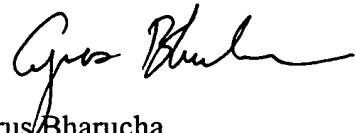
In view of the above remarks, Appellant respectfully submits that the rejections of pending claims 1-6, 11-16, 20-23, and 31-37 are unfounded. Accordingly, Appellant respectfully requests that the Board reverse the rejections of these claims.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop: Appeal Brief – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450, on October 23, 2006.

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2006 Oct 23
Date of Signature

Respectfully submitted,



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APPENDIX OF CLAIMS

1. An apparatus comprising:
 - a rigid frame, wherein the rigid frame comprises at least one substantially planar surface;
 - a substrate having a first surface and a second surface substantially opposite the first surface, wherein the first surface of the substrate comprises a first plurality of fasteners of one of a plurality of hook and loop mechanisms and the second surface of the substrate is coupled to the substantially planar surface of the rigid frame; and
 - a cable fastener comprising a second plurality of fasteners of the one of the plurality of hook and loop mechanisms that covers at least all of one side of the cable fastener, wherein the second plurality of fasteners is configured to engage the first plurality of fasteners, the cable fastener is completely detachable from the substrate, and the second plurality of fasteners is configured not to engage any portion of the cable fastener, wherein the cable fastener is further shaped to define:
 - a variable-width opening,
 - an elongated body having a predetermined width,
 - a head portion at one end of the body, the head portion having a width greater than the predetermined width and having a size substantially similar to a size of the variable-width opening,
 - the head defining an opening through which the elongated body of the cable fastener may pass.
2. The apparatus recited in Claim 1, wherein the plurality of hook and loop mechanisms includes one or more mushroom-shaped stems.
3. The apparatus recited in Claim 1, wherein the plurality of hook and loop mechanisms includes one or more pine-tree-shaped stems.

4. The apparatus recited in Claim 1, wherein the plurality of hook and loop mechanisms includes one or more hooks.
5. The apparatus recited in Claim 1, wherein the plurality of hook and loop mechanisms includes one or more loops.
6. The apparatus recited in Claim 1, wherein the cable fastener may be releasably coupled to any location on the substrate.

7-10. (Canceled)

11. A method of managing cable, comprising:
supporting one or more cables with a cable fastener, the cable fastener being shaped to be capable of defining a variable-width opening, wherein the cable fastener comprises a strap on which are mounted a first plurality of one type of hook and loop mechanisms that covers at least all of one side of the cable fastener, and the first plurality of hook and loop mechanisms is configured not to engage any portion of the cable fastener;
releasably engaging the cable fastener to a substrate, wherein the cable fastener is completely detachable from the substrate and the substrate comprises a second plurality of another type of hook and loop mechanisms; and
providing a rigid frame capable of accommodating a plurality of fiber cables, wherein the rigid frame comprises at least one substantially planar surface and the substrate is coupled to the substantially planar surface of the rigid frame.
12. The method recited in Claim 11, wherein the first plurality of hook and loop mechanisms includes one or more mushroom-shaped stems.
13. The method recited in Claim 11, wherein the first plurality of hook and loop mechanisms includes one or more pine-tree-shaped stems.

14. The method recited in Claim 11, wherein the first plurality of hook and loop mechanisms includes one or more hooks.

15. The method recited in Claim 11, wherein the first plurality of hook and loop mechanisms includes one or more loops.

16. The method recited in Claim 11, wherein the cable fastener may be releasably engaged to any location on the substrate.

17-19. (Canceled)

20. The method recited in Claim 11, wherein the cable fastener is further shaped to define:

an elongated body having a predetermined width; and
a head portion at one end of the body, the head portion having a width greater than the predetermined width;
the head defining an opening through which the elongated body of the cable fastener may pass and having a size substantially similar to a size of the opening.

21. The method recited in Claim 11, wherein the one or more cables comprise one or more fiber optic cables.

22. The method recited in Claim 11, wherein the one or more cables comprise one or more electrical cables.

23. An apparatus comprising:

a means for supporting one or more cables, wherein

the means for supporting one or more cables includes a cable fastener, and
the cable fastener is shaped to define a variable-width opening;

a means for releasably engaging the cable fastener to a substrate that covers at least all of one side of the cable fastener, wherein

the cable fastener is completely detachable from the substrate,
said means for releasably engaging includes at least one of

one or more mushroom-shaped stems,
one or more pine-tree-shaped stems,
one or more hooks, and
one or more loops; and

said means for releasably engaging the cable fastener to a substrate is configured not to releasably engage with any portion of the cable fastener;

a cable routing apparatus comprising a rigid frame and configured to releasably engage the means for releasably engaging the cable fastener, wherein

the rigid frame comprises at least one substantially planar surface and the substrate is coupled to the substantially planar surface of the rigid frame.

24-30. (Canceled)

31. The apparatus recited in Claim 23, wherein the cable fastener further comprises:

a means for encircling the one or more cables such that each of the one or more cables is squeezed into contact with at least one other of the one or more cables.

32. The apparatus recited in Claim 23, wherein the one or more cables comprise one or more fiber optic cables.

33. The apparatus recited in Claim 23, wherein the one or more cables comprise one or more electrical cables.

34. An apparatus for managing cable, comprising:

a cable routing apparatus comprising a rigid frame capable of accommodating a plurality of cables, the rigid frame having at least one planar surface;

a planar substrate having a first surface and a second surface, the second surface being substantially opposite the first surface, the first surface of the substrate comprising a plurality of engagement mechanisms, the second surface of the substrate being coupled to the planar surface of the rigid frame; and

a tie wrap comprising loops capable of engaging the engagement mechanisms of the substrate that covers at least all of one side of the tie wrap, wherein the tie wrap is completely detachable from the substrate and is capable of being releasably engaged to the substrate by means of a hook and loop connection, wherein the loops are configured not to engage any portion of the tie wrap, and wherein the tie wrap is shaped to define:

an elongated body having a predetermined width; and

a head portion at one end of the elongated body, the head portion having a width greater than the predetermined width, and defining an opening through which the elongated body of the tie wrap may pass and the head portion having a size substantially similar to a size of the opening.

35. The apparatus recited in Claim 34, wherein the hooks are mushroom-shaped stems.

36. The apparatus recited in Claim 34, wherein the plurality of cables comprises a plurality of fiber optic cables.

37. The apparatus recited in Claim 34, wherein the plurality of cables comprises one or more metal cables.

38. (Canceled)

APPENDIX OF EVIDENCE

None.

APPENDIX OF RELATED PROCEEDINGS

None.